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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,931	02/12/2002	Shunpei Yamazaki	740756-2433	3751
31780	7590	04/23/2004	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			ISAAC, STANETTA D	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

10/072,931

Applicant(s)

YAMAZAKI ET AL.

Examiner

Stanetta D. Isaac

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) 1-46, 48-50, 52, 54, 56-58, 60-62 and 64-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47, 51, 53, 55, 59 and 63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group IV claims (47, 51, 53, 55, 59, and 63) filed on 03/24/04 is acknowledged.
2. Claims withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse. *Examiner note's* that new added claims 78-80, however, are in addition withdrawn from consideration. This restriction is deemed proper and is **made final**.

Response to Arguments

3. Applicant's arguments with respect to claims 47, 51, 53, 59, and 63 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 47, 51, 53, 55, 59 and 63 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al. US Patent 6,048,758

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yamazaki teaches the invention as claimed. See **FIGS. 1A-11**, where Yamazaki teaches a method of manufacturing a semiconductor device comprising: forming a first semiconductor film having an amorphous structure over a substrate; providing the first semiconductor film with a material for promoting crystallization; heating the first semiconductor film for crystallizing; irradiating the first semiconductor film with a laser light for improving crystallinity; forming a barrier layer over the first semiconductor film having crystalline structure; forming a second semiconductor film over the barrier layer; adding an inert gas element to an upper layer of the second semiconductor film; gettering the material for promoting crystallization into the upper layer of the second semiconductor film.

6. Pertaining to claim 53, Yamazaki teaches a method of manufacturing a semiconductor device according to claim 47, wherein the barrier layer is formed by oxidizing a surface of the first semiconductor film by irradiating ultraviolet light.

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7. Pertaining to claim 55, Yamazaki teaches a method of manufacturing a semiconductor device according to claim 47, wherein the inert gas element is at least an element selected from the group consisting of He, Ne, Ar, Kr and Xe.

8. Pertaining to claim 59, Yamazaki teaches a method of manufacturing a semiconductor device according to claim 47, wherein the second semiconductor film comprises the inert gas element at a concentration of 1×10^{19} to 1×10^{22} /cm³.

9. Pertaining to claim 63, Yamazaki teaches a method of manufacturing a semiconductor device according to claim 47, wherein the semiconductor device is applied to an electronic apparatus selected from the group consisting of a personal computer, a video camera, a mobile computer, a goggle type display, a DVD, a digital camera, a front type projector, a rear type projector, a mobile phone and an electronic book.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. US Patent 6,048,758 in view of Matsuki et al. US Patent 5,960,252.

12. Yamazaki teaches the semiconductor method substantially as claimed, however, fails the fails a method of manufacturing a semiconductor device according to claim 47, wherein the barrier layer is formed by oxidizing a surface of the first semiconductor film by using a solution containing ozone. See (col. 2 lines 64-67; col. 4 lines 60-64; col. 5 lines 1-4), where Matsuki

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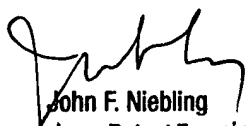
teaches the above step. In view of Matsuki, it would have been obvious to one of ordinary skill in the art to incorporate Matsuki into Yamazaki's semiconductor method because the TEOS-CVD process using ozone as an oxidizing agent enables film deposition at a lower temperature compared to the case using oxygen as an oxidizing agent and since Yamazaki teaches the use of a rare gas including TEOS gas in would be obvious to incorporate Matsuki's method.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanetta D. Isaac whose telephone number is 571-272-1671. The examiner can normally be reached on Monday-Friday 9:30am -6:30pm.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling can be reached on 571-272-1679. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stanetta Isaac
Patent Examiner
April 19, 2004


John F. Niebling
Supervisory Patent Examiner
Technology Center 2800